



# South Dakota *Wing Roundup*



**CIVIL AIR PATROL • SUMMER 2015 • UNITED STATES AIR FORCE AUXILIARY**

Honoring CAP Veteran  
John Gibson "Jack" Rae Jr.





**South Dakota Wing, Civil Air Patrol**  
**4275 Airport Road, Ste. A, Rapid City, SD 57703**  
**Office: 605-393-4215, Fax: 605-393-4216**

Email: southdakotawa@gmail.com

Website: <http://sdcap.us>,

Facebook: [www.facebook.com/SDWingCAP](http://www.facebook.com/SDWingCAP)

Flickr: <http://www.flickr.com/photos/102270464@N02/>

**Col. John N. Seten**

Commander, South Dakota Wing, Civil Air Patrol

#### **South Dakota Wing Roundup Staff**

Publishers

**Col. John Seten**, South Dakota Wing Commander

**Lt. Col. Richard Larson**, South Dakota Wing Vice Commander

Editor

**Maj. Bruce Kipp**, South Dakota Wing Public Affairs Officer

Email: [paa.sdwg@gmail.com](mailto:paa.sdwg@gmail.com), Cell: 605-261-4507

**The South Dakota Wing Roundup** is an authorized journal of the South Dakota Wing of the Civil Air Patrol, the official auxiliary of the U.S. Air Force. It is published by a private firm in no way connected to the U.S. Air Force or the Civil Air Patrol Corporation. The comments and opinions expressed in the articles are those of the contributors and do not reflect the position of the U.S. Government, the U.S. Air Force, the Civil Air Patrol Corporation, or the South Dakota Wing. The appearance of advertisements, supplements or inserts, does not constitute an endorsement by CAP or the U.S. Air Force of the products and services advertised.

**The South Dakota Wing Roundup** encourages contributions from CAP members, the military, related agencies and the general public. Articles must be original and free of copyright constraint. The Roundup magazine reserves the right to approve, reject, edit, abridge or expand any submission. Articles must be in *Associated Press* style. Do not embed photos or graphics in the article - send them as attachments in jpeg format and provide complete captions. Photos must be a minimum of 1 Megabyte resolution or higher. Always include contact information at the top of your submission. Email articles to [paa.sdwg@gmail.com](mailto:paa.sdwg@gmail.com). Other material should be sent to South Dakota Wing Public Affairs, Attn: Roundup, 6016 S. Bremerton Place, Sioux Falls, SD 57106. Ideas for future articles should be discussed in advance with the Editor, Maj. Bruce Kipp.

**The Civil Air Patrol** is a non-profit volunteer organization federally chartered by Congress under 36 U.S.C. §§201-28, which is dedicated to emergency services, aerospace education and motivation of America's youth to the highest ideals of leadership and public service. Funds received by the advertising sales are used to support this publication and to support various CAP activities throughout the state of South Dakota.

**For information on advertising rates and space, please call: 1-800-635-6036**

## *In This Issue . . .*

<i>Delmont Tornado</i>	3
<i>Commander's Corner</i>	4
<i>CAP National Commander Visits South Dakota Wing</i>	5
<i>CAP Congressional Gold Medal Update</i>	7
<i>Cadets Present Challenge Coin to Squadron Commander</i>	8
<i>CAP Officer Inducted into Engineering Order</i>	9
<i>Exercise "Constant Watch-15"</i>	11
<i>Congressional and Wing Legislative Squadron</i>	14
<i>Recreating a WWII-Era CAP Uniform</i>	15
<i>The 2015 South Dakota Wing Conference and Awards Banquet</i>	18
<i>Wing Cadet Leadership School</i>	21
<i>What's an ELT and How Does CAP Track It?</i>	23
<i>Wings of Our Founders - 1942 CAP Piper J-3 Cub</i>	28
<i>Team Big Sioux Wins Second Place in National CyberPatriot-VII</i>	31
<i>South Dakota Wing's First Senior Member NCO</i>	33
<i>Wing Legislative Day at the State Capitol</i>	34
<i>Winter Survival Training</i>	35

---

*COVER PHOTO: A 1/6 scale Piper J-3 in 1942 CAP livery built by South Dakota Wing Chaplain (Lt. Col.) Gary Rae to honor his late father, WWII CAP veteran John Gibson "Jack" Rae Jr., a recipient of the CAP Congressional Gold Medal. The photo is of Jack in WWII CAP uniform circa 1943. Next to it is the CAP CGM presented to the Rae family by SD Congresswoman Kristi Noem.*

---





*The church's brick construction did not spare it from the tornado's fury.*



*The tornado demolished the town's new fire hall.*

# DELMONT TORNADO


*By Maj. Bruce Kipp, CAP  
Wing PAO*

On Sunday, 10 May, at 10:45 local time an EF-2 tornado with winds over 100mph roared through the small town of Delmont, located about 90 southwest of Sioux Falls. The town of about 200 lost all power, water and telephone service. 84 structures in and around Delmont were damaged or destroyed. Fortunately there were no fatalities, however at least nine people were injured and some livestock were killed. Hardest hit was the western edge of the town with Seaman Street suffering the majority of the damage. The town's new fire hall and a Lutheran Church bore the brunt of the tornado's fury.

Shortly after learning of the tornado South Dakota Wing Commander Col. John Seten authorized a Sioux Falls-based Civil Air Patrol Cessna-



*Severely damaged and destroyed homes on the town's west side.*

182/G1000 aircraft to fly over the area and take photos of the damage. However, the poor weather conditions on the 10th prevented effective aerial photography. The aircrew for that sortie was Mission Pilot Capt. Matt Meert, Mission Scanner Capt. Karla West and Mission Observer Capt. Jason Erickson. A second aerial photography sortie over Delmont was conducted on the 12th. The aircrew was Mission Pilot Col. John Seten, Mission Observer Capt. Neil Schmid, and Mission Scanner Capt. Karla West. Nearly 200 high resolution photos of the damage were taken and provided to emergency management officials, first responders and the media. 



*Badly damaged grain bins being unloaded.*



## **Commander's Corner**

*By Col. John Seten, CAP  
South Dakota Wing Commander*



It seems like I just wrote an article for the last Wing Roundup and I'm being told it's time to sharpen the pencil and do another one. That means spring is here and summer just around the corner. Goodbye winter! - although the second week of May brought tornadoes and devastation to the eastern South Dakota while a snowstorm was closing roads in the western part of the state.

As I write this I'm listening to the Exercise "Constant Watch-15" radio traffic in my office. We have people across the state participating in this communications exercise and we have an airborne repeater covering the state. We are gearing up for another search and rescue exercise at the Crazy Horse Composite Squadron in Custer at the end of May and we are again supporting the South Dakota Air National Guard by performing Low-Level Route Surveys of their training areas. We'll likely have numerous Low-Level Route Surveys for the newly expanded Powder River Military Operations Area as well. We are hosting the Joint Dakotas Encampment at the South Dakota National Guard's Camp Rapid in Rapid City this year and I know the staff has been busy preparing for that.

Our wing conference was in April and I we

had a great turnout. The highlight of the conference was the presentation of a Congressional Gold Medal to the family of the late WWII CAP veteran John Gibson "Jack" Rae Jr by US Representative Kristi Noem. Accepting the award on John's behalf was Lt. Col. Gary Rae, our wing chaplain. Our members received many well deserved awards as well.

We are still actively seeking individuals and/or relatives living in South Dakota to receive the CAP Congressional Gold Medal. Anyone that served in CAP during WW II is eligible for the award and we're getting more and more leads that we're following up on. I expect to have a number of medals that we'll be presenting around the state in the next few months. If anyone is aware of members of CAP during WW II please let us know.

The South Dakota Wing is not large in numbers of members but we've got quality members and they do a great job for us. When called upon for a REDCAP we always put together a team to get the job done. We've got a great group!

***Have a great summer  
and stay safe!***





# CAP NATIONAL COMMANDER VISITS SOUTH DAKOTA WING

*By Maj. Bruce Kipp, CAP  
Wing PAO*

The National Commander of the Civil Air Patrol, Major General Joseph Vazquez, paid a brief visit to Sioux Falls today to meet with members of CAP's South Dakota Wing. The meeting took place at the Holiday Inn Sioux Falls – City Center. Accompanying Maj. Gen. Vazquez was his wife, CAP Lt. Col. Leslie Vazquez, Civil Air Patrol's Aviation Industry Liaison.

Major General Vazquez briefed the attendees on upcoming and proposed organizational changes, various operational issues, on closer relations with



*General Vazquez talks with a few of the cadets in attendance.*



*General Vazquez speaks to the attendees about CAP organizational and operational issues.*




*South Dakota Wing members pose with General Vazquez.*

the Aircraft Owners and Pilots Association, and making CAP's data interfaces more user-friendly. At the end he took questions from Wing members.

SDCAP Wing Commander Col. John Seten commented, "What a great opportunity for our members to hear the way ahead from the top, while we give leadership the view from the field. We really appreciate the General and Lt. Col. Vazquez visit.

CAP Major General Vazquez was appointed to a three-year term as CAP's National Commander/

CEO on April 4, 2014 and assumed command at a formal change-of-command ceremony on August 15, 2014, at CAP's 2014 National Conference. Prior to his appointment as National Commander he served a three-year term as National Vice Commander with the grade of CAP Brigadier General. The National Commander and National Vice Commander are the only two CAP officers to hold general's grade. 

# CAP Congressional Gold Medal Update

*By Maj. Bruce Kipp, CAP  
Wing PAO*

CAP was founded December 1, 1941, a week before the bombing of Pearl Harbor and the United States' entry into WWII. CAP units quickly formed along the Atlantic and Gulf Coasts to conduct anti-



*Congresswoman Noem presents the CAP CGM to Tom Senesac, Earl Wilkinson's grandson, representing the family.*

submarine patrols to help ward off

German U-boat attacks on American oil tankers and cargo ships. Over the next 15 months, CAP members used their own planes to hunt German subs. The patrols accounted for 86,685 missions that involved 244,600 flight hours and over 24 million air miles. They sighted 173 submarines, are credited with dropping bombs that sank two subs, and located more than 300 survivors of U-boat attacks. Overall the members of the Civil Air Patrol logged an estimated 750,000 hours of flight time during the war, Sixty-four members died in service during World War II. In the interior of the US, CAP's early members also took to the skies to patrol the nation's borders, tow targets for military training, watch for forest fires, conduct search and rescue missions, provide disaster relief, transport people and parts and conduct orientation flights for future pilots.

On 10 December, at a ceremony in Statuary Hall at the U.S. Capitol a Congressional Gold Medal (CGM) was presented to collectively honor World War II members of the Civil Air Patrol whose valor and dedication during the war helped thwart the enemy submarine attacks against our vital shipping lines, saved lives, secured our nation's borders, conducted missions to support the war effort, and helped train members of the armed forces. The CGM was accepted by Lester Wolff, a WWII CAP sub-chaser and former U.S. representative from New York and by CAP National Commander Maj. Gen. Joe Vazquez on behalf of all WWII-era CAP members.

Later that evening a gala dinner was held for surviving veterans, families of deceased members, CAP members and distinguished guests. General Vazquez personally presented the CGM to each CAP WWII veteran or to a member of the family of a deceased veteran who were present.

The South Dakota Wing currently knows of six WWII CAP veterans who are to receive the CGM; two living, Sylvia Henkin, a resident of Sioux Falls and Ms. Pauline Hanson Brehe, a resident of Pierre, and four deceased individuals – Luverne “Vern” Kraemer, Earl Wilkinson, John Rae Jr. and Vernon Jeffries whose families reside in the state.



*Congresswoman Noem presents the CAP CGM to Gary Rae, “Jack” Rae’s son, representing the family.*

Mrs. Norma Kraemer, widow of Vern Kraemer, travelled to

*Continued on page 36 . . .*



*The front (obverse) and back (reverse) of the CAP Congressional Gold Medal.*



*Norma Kraemer, widow of Vern Kraemer, receives her husband's CGM from CAP National Commander Maj. Gen. Joe Vazquez.*



# Cadets Present Challenge Coin to Squadron Commander

*By Capt. Karla West, CAP, Sioux Falls Composite Squadron and  
Maj. Bruce Kipp, CAP, Wing PAO*

On 2 April, at the weekly meeting of the Sioux Falls Composite Squadron in Sioux Falls the cadets had a surprise for their commander. In a rare turn of events the cadet corps presented Squadron Commander Capt. Jason Erickson with a challenge coin to thank him for all of the hard work he puts in for the cadets and for the squadron.

In the Civil Air Patrol, challenge coins are normally presented by commanders to a member of their unit as an award for outstanding service, a reward for excellent performance of duty, or to recognize a specific act worthy of special recognition but not meeting the criteria for an official medal. For cadet members of a CAP unit to present one to their commander is most unusual.

According to Wikipedia, a challenge coin is a coin or medallion bearing an organization's insignia or emblem. Challenge coins are small, ranging in size from 1" to 2". They may be cast or die struck and have a variety of finishes. Many have an ornate and colorful design. Some challenge coins have space on the back (the reverse) for an inscription. The coin presented to Capt. Erickson has "2015



*Capt. Jason Erickson, commander of Sioux Falls Composite Squadron thanking the cadets for the honor they bestowed on him.*



*Ceremony at which Capt. Jason Erickson received his challenge coin from the cadets of the Sioux Falls Composite Squadron.*



*Challenge coin presented to Capt. Jason Erickson, commander of Sioux Falls Composite Squadron. The coin has "2015 SFCS" engraved on the reverse.*


S F C S " engraved on the reverse.

These coins are still customarily called "challenge coins" primarily due to military social tradition. A challenge is a common way to check that unit members have their coin with them. At a social event the challenge begins with the challenger displaying his/her coin and loudly announcing "Coin Check". Everyone challenged must show their own coin. Anyone failing to do so must buy a round of drinks for everyone showing their coin. If everyone challenged shows their coin then the challenger

must buy the round of drinks.

In the military and civilian word challenge coins are also presented for other reasons, for example to prove membership in an organization as a way to boost morale and enhance esprit de corps. Military officials give them to non-military personnel for outstanding service or as a reward. In addition, challenge coins can be presented by any organization as a memento.

Recognized as an "Americanism", challenge coins have steadily grown in popularity among U.S. military units and even to foreign militaries. Challenge coins have also become popular with non-military organizations such as law enforcement and emergency services and fraternal groups. Even the news and entertainment industry uses challenge coins finding them an excellent way to foster team spirit and build goodwill. An entire hobby of collecting challenge coins has sprung up.

For an excellent article on challenge coins see [http://en.wikipedia.org/wiki/Challenge\\_coin](http://en.wikipedia.org/wiki/Challenge_coin), accessed for this article on 4 April 2015. 

# CAP Officer Inducted into Engineering Order

*By Maj. Bruce Kipp, CAP  
SDWG Public Affairs Officer*

*The logo of the Order  
of the Engineer*



First Lieutenant Victoria Bierwirth of the Crazy Horse Composite Squadron in Custer, a member of the Civil Air Patrol's South Dakota Wing, was inducted into the Order of the Engineer at a ceremony on 17 February at the South Dakota School of Mines and Technology. 98 graduating seniors of 2015 from the computer sciences and various engineering disciplines accepted the Obligation of the Engineer.



*CAP Lt. Victoria Bierwirth wearing her Engineer's Ring.*

Lt. Bierwirth will graduate in May 2015 with a Bachelor of Science degree in Geological Engineering with minors in Geospatial Technology and German. If all goes as planned, she will pursue a Master of Science degree in Groundwater Management in Germany beginning in 2016.

The Order of the Engineer was founded in the United States to foster pride, dedication and responsibility to the engineering profession. The first induction ceremony was held in 1970. Since then, induction ceremonies have been held across the U.S. at which graduate and registered engineers are invited to accept the Obligation of the Engineer, a formal ethical code of an engineer's responsibilities to the profession and to

the public. Only those who meet high standards of professional engineering training or experience are invited to accept the obligation, which is voluntarily received for life. The commitment is not a trivial act but is, rather, like the merging of the individual and profession. One voluntarily pledges to uphold the standards and dignity of the engineering profession and to serve humanity by making the best use of Earth's precious and limited resources.

Upon induction the individual is presented with a stainless steel engineer's ring to present to the public a visible symbol identifying the engineer. In the United States the ring is worn on the fifth finger of the working hand.

South Dakota, which falls within Region III of the Order, has two chapters (called Links) in the state; at South Dakota State University (Link 21, established in 1975) and at the South Dakota School of Mines and Technology (Link 62, established in 1980).

Victoria is a remarkable young woman. Her passion for geological engineering began with a job with the National Park Service as a Park Guide at Jewel Cave National Monument. This was followed by a position as a research co-op with NASA working with satellite and airborne imagery

*Continued on page 13 . . .*



*The Oath Certificate and Steel Ring of the Order of the Engineer.*



# EXERCISE “CONSTANT WATCH-15”

*By Capt. Jerry Gabert, CAP  
Wing Communications Officer*

The South Dakota Wing participated in the Civil Air Patrol’s National Communications Exercise “Constant Watch 15” on Friday and Saturday, the 15th and 16th of May. This exercise is held annually to test CAP’s ability to pass messages throughout the nation on long-range high frequency (HF) radio. This year we were also allowed to pass messages from HF operators to other units over short range very high frequency (VHF) radios. The South Dakota Wing’s portion of the exercise was organized and directed by Capt. Jerry Gabert, Wing Director of Communications.

The overall exercise began on the afternoon of 15 May Friday.



*Lt. Hinkhouse passes message traffic during the exercise.*

Several SDWG radio operators participated on Friday afternoon and evening. Capt. Jerry Gabert and Lt. Rob Hinkhouse of Sioux Falls Composite Squadron, checked in on an HF radio in Sioux Falls. Lt. Todd Dravland of Pierre Composite Squadron checked in on his HF radio in Pierre. SM

Jeff Shawd of Sioux Falls Composite Squadron operated his HF radio in Valley Springs and took several Whiskey Tango (numerically encoded) messages and successfully entered them into the



*Mission Pilot Capt. Neil Schmid and Mission Observer Maj. Elliott Filler prepare for their airborne repeater mission.*



*The Sioux Falls Mission Base crew prepares for the exercise.*

CAP computer system. Lt. Col. Dave Jefferies of Rushmore Composite Squadron in Rapid City checked in from his mobile HF radio and took Whiskey Tango messages while also volunteering with the Red Cross at Delmont, SD. The weather conditions were not conducive for HF reception due to the thunderstorms passing through the western part of the state but we still managed to successfully pass some messages.

Capt. Gabert and Lt. Hinkhouse were also busy on Friday night planning messages to send on Saturday. They made up a practice decoder to simulate sending coded messages and then formulated several coded messages.

On Saturday morning the exercise was expanded to include an airborne radio signal repeater. The airborne repeater was carried in the Sioux Falls Composite Squadron’s Cessna-182 piloted by Capt. Neil Schmid with Maj. Elliott Filler as the Mission Observer. Through the airborne radio signal repeater we were able to establish communications from Sioux Falls to Brookings, from Brookings to Valley Springs, from Valley Springs to Sioux Falls, and from Pierre to Delmont.

SDWG members that participated on Saturday were Lt. Col. Mark Huntington, Lt. Rob Hinkhouse, Capt. Jerry Foy, Capt. Jerry Gabert and Cadet Eric Ortega and Cadet Airman Oscar Holmberg at the

## Civic Leadership Academy

*Continued . . .*



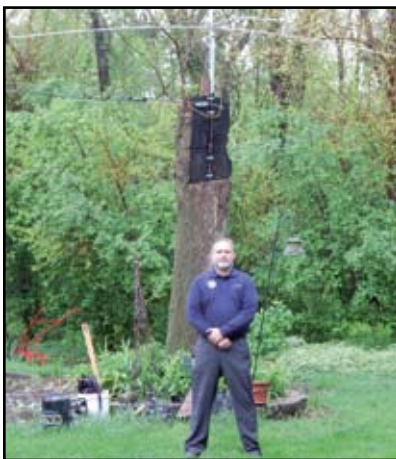
**SM Shawd at his awesome radio shack in Valley Springs.**

Sioux Falls Mission Base, Capt. Shannon Hofer, Cadet Lt. Col. Joshua Klosterman and Cadet Capt. Tyler Gross at the Brookings Mission Base, Lt. Col. Tam Gatje and Lt. Todd Dravland in Pierre, SM Jeff Shawd in Valley Springs and Lt. Col. Dave Jefferies in Delmont.

Many practice coded messages were sent between Sioux Falls, Brookings and Valley Springs. The messages were then deciphered by the receiving station and verified by the sending station.

Overall this was a very successful communications exercise. There were a few unexpected obstacles we needed to work around such as the stormy weather, a few technical difficulties, and one of our key HF operators being called for Red Cross disaster duties. Lt. Col. Jefferies found a

way around that by operating the mobile HF radio in his vehicle when he was not on his Red Cross duty shift. Thanks to all who participated and hope to expand our participation in the Constant Watch exercise next year. 🇺🇸



**SM Shawd preps his HF antenna for exercise Constant Watch-15.**

## CAP Officer Inducted

*Continued from page 9 . . .*

at the Goddard Space Flight Center. She moved on to be a Geoscience-Public Policy intern at the Washington, DC-based American Geosciences Institute (AGI)-Government Affairs Program where she was the liaison between the geosciences community and Congress. At both NASA and AGI she published articles in various technical magazines. Her next adventure led her to the Beartooth Mountains of Montana where she was a geology intern at the United States' lone platinum and palladium mine at Stillwater Mining Company. Immediately following Stillwater she left for Germany as she had been awarded a fellowship with the Congress-Bundestag Youth Exchange for Young Professionals where she represented the United States as a student ambassador in Germany for one year (2012-2013). She was one of 75 students selected throughout the United States to participate in this cultural exchange where she learned the German language, attended a German university, and interned with a German company, Beak Consultants. While at Beak Consultants, she worked on mineral prospective maps for Rwanda and Uganda and assisted in determining the rate of ground settlement at a former German mine site. Since her return from Germany, she is concluding her studies while also working as an Engineering Technician for the U.S. Forest Service, as a Student Aid Researcher in a water quality research in Custer, as a Young Ambassador representing the German Academic Exchange Service (Deutscher Akademischer Austausch Dienst) at the South Dakota School of Mines and Technology.

If that were not busy enough, Ms. Bierwirth also serves as a First Lieutenant in the South Dakota Wing of the Civil Air Patrol, the all-volunteer official civilian auxiliary of the U.S. Air Force. She is a member of the Crazy Horse Composite Squadron in Custer where she is the Deputy Commander for Cadets and the unit's Aerospace Education Officer. She enthuses, "I have always had a love for aerospace and teaching. My cadets make me super proud everyday inside and outside of CAP. To be honest, they make my job really easy."



# Congressional and Wing Legislative Squadron

*By Maj. Bruce Kipp, CAP  
Wing Public Affairs Officer*

CAP Regulation 20-3 authorizes each state's Civil Air Patrol Wing to establish a special squadron for members of their state legislature. Membership in the state Legislative Squadron is open to state legislators, elected state officials and key members of their staff. In 2013, South Dakota Wing set about forming a Legislative Squadron by filing the charter paperwork with CAP National Headquarters after which we began recruitment.

Each member of a state Legislative Squadron receives a CAP membership certificate and identification card and is promoted to the honorary grade of CAP Major. Legislative Squadron members are authorized to fly in CAP aircraft, visit CAP unit meetings and attend social events.

Currently, membership in the South Dakota Wing Legislative Squadron stands at 11; three state senators and eight state representatives.

At the national level there is a special Civil Air Patrol Congressional Squadron open to members of congress and their staffs. All three South Dakota members of congress have joined the Congressional Squadron.

## Congressional Squadron

Sen. Mike Rounds

Sen. John Thune

Rep. Kristi Noem

## Legislative Squadron

Sen. Betty Olsen

Sen. Bruce Rampelberg

Sen. Tim Rounds

Rep. Blaine Campbell

Rep. Spencer Hawley

Rep. Leslie Heinemann

Rep. Dan Kaiser

Rep. Isaac Latterell

Rep. Tona Rozum

Rep. Jim Stalzer

Rep. Mathew Wollmann



*A member of a state Legislative Squadron is eligible to wear the CAP uniform. This is the epaulet sleeve for a CAP Major that is worn with the male and female Aviator shirt uniform.*

The South Dakota Wing is especially fortunate that Manny Steele, a former state Representative and member of the State Legislative Squadron, is now a Lieutenant in the Sioux Falls Composite Squadron. Lt. Steele, who serves as the Wing's Assistant Government Relations Officer, maintains contact with his former legislative colleagues and has been instrumental in recruiting new members to the Legislative Squadron.

South Dakota Wing plans to enliven the experience of the members of the state Legislative Squadron by holding such activities as a "Fly-a-Legislator Day", inviting them to observe and perhaps participate in a search and rescue training mission, and welcoming them to attend squadron meetings and social events. 🇺🇸



# Recreating a WWII-ERA CAP Uniform

*By South Dakota Wing Chaplain Gary Rae (Lt. Col., CAP)*

**Back to our Roots:** 2016 marks the 75th Anniversary of the Civil Air Patrol. I have been a member of CAP for 32 years and over that time I've accumulated keepsakes from CAP's 50th, 60th and 70th anniversaries. But the recent awarding of the CAP Congressional Gold Medal and the upcoming 75th anniversary caught my attention! Especially as my own father, John Gibson "Jack" Rae, Jr. was a WWII CAP veteran. His picture in a 1942 CAP uniform, and learning he could receive the Congressional Gold Medal posthumously inspired me to look closer at our CAP roots.



*Chaplain Rae in his recreated WWII CAP uniform preparing for his interview on South Dakota Public Broadcasting Television's "Dakota Life" program.*

Ideas began to flow when I was asked by Maj. Todd Epp, our Wing Historian, to serve on the 75th Anniversary History Task force. I felt that one of the best ways to tell our story was make it walk and talk again

using an authentic 1942 CAP uniform. Why 1942? It was the year when my father was in CAP as evidenced by his dated photograph with the CAP shoulder patch in clear view.



*WWII Civil Air Patrol award ribbon for 500 hours of volunteer service.*

**Assembling the Uniform a Piece at a Time:** It took months of searching the Internet, eBay and other sources I could to find to obtain the uniform's insignia; silver cut out CAP metal collar insignia, the silver prop and wings collar insignia, and the distinctive WWII-era CAP officer's cap insignia. Because I had my father's original CAP shoulder patch, I wanted the uniform to be as authentic as



*Chaplain Rae wearing his recreated WWII CAP uniform (right side). Note the collar insignia.*



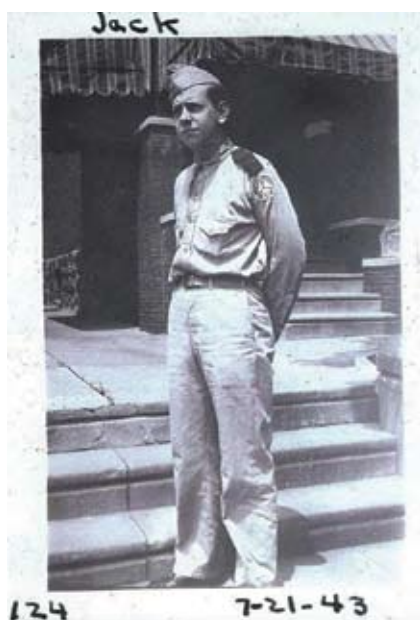
*Chaplain Rae wearing his recreated WWII CAP uniform (left side). Note the collar insignia, patch, pilot's wings, and award ribbon.*

possible. Next I found a site that had original 500-Hour Service Ribbons left over from the war. Ribbons were different then but still tell important stories about the person to whom they were awarded! Eventually I found a pair of real sterling silver WWII CAP pilot's wings worn by a man who flew courier service in CAP off the coast of Massachusetts.



*Close-up of WWII CAP peaked cap with distinctive CAP badge.*

Next I searched for a replica khaki uniform. That's when I came across the on-line U.S. Wings Company. I purchased the cotton trousers, shirt, belt/buckle, and the coveted khaki crushed pilot's cap. It did not take long to see that without the modern cotton/polyester blend they would wrinkle easily and require more care than present day uniforms! Because U.S. Wings clothing ran small I was unable, with my longer arms, to wear the long sleeve khaki uniform shirt which would bear the individual's service record on the sleeve. That is one inaccuracy. Although I already had khaki socks, the other inaccuracy was my refusal to buy tan shoes!



*"Jack" Rae Jr. in WWII CAP uniform wearing garrison cap, hand dated 21 July 1943.*

Still uncertain that the uniform was accurate enough, I scoured all the regulations, stories of CAP history and photographs that I could find from those days. That's when Maj. Kipp,

SDWG PAO, gave me the name and email address of a CAP member in the Pennsylvania wing that is part of a CAP reenactment group.

**History came alive!** At first I asked George Brezik about the strange red epaulettes that were only worn for two years, never to be seen again! George was very encouraging and excited to help me on my quest! He sent me a set of epaulettes which would serve as a pattern. With red material on hand I took a modified pattern to my military seamstress. I now have the pattern and plenty of material for anyone that would like to sew their own. According to George, in those days, everyone pretty much had to make their own as well!

With plenty of old metal rank insignia sitting in my drawers to place on the red epaulettes, I reduced my grade from Lieutenant Colonel to Major in order to be true to CAP's rank structure in 1942. You see, there were no authorized Lieutenant Colonel's until 1944! However, those who wore Major's rank in those days were usually the Wing Commander!

Later, Mr. Brezik sent me a copy of the *"1944 CAP Handbook from the Texas Southern Flight"*. It was a gold mine of history and information on uniforms, and on CAP's missions, training and regulations. It became the authority for my telling our story!

At the 2015 Wing Conference in April, Maj. Epp led a session seeking ideas for celebrating CAP's 75th Anniversary. The task force wants CAP history to

come alive again. We would like to replicate CAP radio transmissions, re-enact anti-submarine or tow target missions, and teach today's members the values and commitments that formed our Core Values. We are encouraging each squadron to take time to explore their local history



*Undated photo of "Jack" Rae Jr. in WWII CAP uniform wearing peaked cap.*

during the year.

The DNA of CAP lies within the men, women, and cadets of 1942. To study history just for it to be a Wikipedia of trivia is meaningless unless it can teach and re-connect us to the missions of the present day. The scripture Isaiah 51:1 says *"Look to the rock from which you were cut and the quarry from which you were digged"*. 1942 was the quarry from which we were digged, and the men and women are the rocks that were shaped so that we could stand upon their shoulders. If we are cut from that same quarry, and shaped by their values, future generations will stand upon OUR shoulders.

***Semper Vigilans!*** 



# THE 2015 SOUTH DAKOTA WING CONFERENCE AND AWARDS BANQUET

*By Maj. Bruce Kipp, CAP  
Wing PAO*

The South Dakota Wing held its 2015 Wing Conference and Awards Banquet on Saturday, 18 April at the Clubhouse Hotel and Suites in Pierre. Approximately 85 officers and cadets from SDWG attended along with several guests.

Distinguished visitors attending were: Col. Robert Todd, North Central Region Commander; Col. Darrell Nelson, Nebraska Wing Commander; Lt. Col. Bonnie Braun, North Central Region Director of Drug Demand Reduction Programs; Lt. Col. Don Barbalace, National Headquarters Inspector General Team; and Capt. Chuck Brudtkuhl, National Headquarters Communications Team and Iowa Wing Director of Communications.

The first part of the morning was a general session with wing staff officers and squadron commanders making presentations. The highlight of the morning was a skit performed by cadets, under the supervision of Lt. Col. Linda Buechler, on the collateral consequences of drunk driving. Following the general session the senior member participants split up to attend breakout sessions on a variety of administrative and operational topics.



*Wing Commander Col. John Seten presents Civil Air Patrol membership documents to South Dakota Congresswoman Kristi Noem.*



*Congresswoman Kristi Noem presents the CAP Congressional Gold Medal to Wing Chaplain (Lt. Col.) Gary Rae, son of deceased WWII Civil Air Patrol veteran John Gibson "Jack" Rae Jr.*

The cadets attended breakout sessions on Drug Demand Reduction, Aerospace Education, and the National Cadet Competition. In addition, the Wing's Cadet Advisory Council met. The senior member and cadet breakout sessions lasted until the late afternoon when it was time to prepare for the evening banquet and awards ceremony.

The guest speaker at the evening banquet was South Dakota's Congresswoman Kristi Noem. Two highlights of the awards ceremony were the presentation of the CAP Congressional Gold Medal to Wing Chaplain Lt. Col. Gary Rae, the son of deceased WWII CAP veteran John Gibson "Jack" Rae Jr, and the presentation of Civil Air Patrol membership credentials to Ms. Noem. In addition, a number of wing, squadron and individual awards were presented.

## **NORTH CENTRAL REGION "OF THE YEAR" AWARD**

### ***DDR Officer of the Year***

Lt. Col. Linda Buechler, Director of Cadet



Programs, South Dakota Wing Staff

## **WING “OF THE YEAR” AWARDS**

***Col Robert V. “Bud” Payton Public Affairs Officer of the Year***

1<sup>st</sup> Lt. Kris Bierwirth, Crazy Horse Composite Squadron (Custer)

***Aerospace Education Officer of the Year***

1<sup>st</sup> Lt. Victoria Bierwirth, Crazy Horse Composite Squadron (Custer)

***Public Affairs Officer of the Year***

Lt. Col. William Hopewell, Lookout Mountain Composite Squadron (Spearfish)

***Drug Demand Reduction Member of the Year***

Lt. Col. Linda Buechler, South Dakota Wing Staff

***Professional Development Officer of the Year***

Capt. Karen Espeland, Sioux Falls Composite Squadron (Sioux Falls)

***Cadet Program Officer of the Year***

Lt. Col. Myra Christensen, Pierre Composite Squadron (Pierre)

***Squadron of the Year***

Big Sioux Composite Squadron (Brookings)

***Senior Member of the Year***

Capt. Neil Schmid, Sioux Falls Composite Squadron (Sioux Falls)

***Cadet of the Year***

C/Lt Col Joshua Klosterman, Big Sioux Composite Squadron (Brookings)

***Cadet NCO of the Year***

C/MSgt Steven Diaconu, Sioux Falls Composite Squadron (Sioux Falls)

## **UNIT AWARDS**

***Quality Cadet Unit Award***

Lookout Mountain Composite Squadron (Spearfish)

Rushmore Composite Squadron (Rapid City)



***Wing Vice Commander Lt. Col. Richard Larson, Guest of Honor SD Congresswoman Kristi Noem, and Wing Commander Col. John Seten.***

***Squadron of Merit Award***

Sioux Falls Composite Squadron (Sioux Falls)

## **INDIVIDUAL AWARDS**

***Search and Rescue “Find” Ribbon***

Mike Beason, South Dakota Wing Staff

Capt. William Collister, Lookout Mountain Composite Squadron (Spearfish)

Maj. Craig Goodrich, Rushmore Composite Squadron (Rapid City)

Capt. Joshua Hall, Rushmore Composite Squadron (Rapid City)

Lt. Col. Gary Hewett, Rushmore Composite Squadron (Rapid City)

1<sup>st</sup> Lt. Ryan Jones, Rushmore Composite Squadron (Rapid City)

Maj. Bruce Kipp, South Dakota Wing Staff

Maj. Deryl Miles, South Dakota Wing Staff

Capt. Patrick Nowlin, Rushmore Composite Squadron (Rapid City)

Maj. David Small Jr., South Dakota Wing Staff

C/2<sup>nd</sup> Lt Bradley Blansett, Lookout Mountain Composite Squadron (Spearfish)

C/1<sup>st</sup> Lt Jared Doyle, Lookout Mountain Composite Squadron (Spearfish)

C/A1C Malia Goodrich, Rushmore Composite Squadron (Rapid City)

*Continued on page 27 . . .*

# Wing Cadet Leadership School

*By Cadet Second Lt. Nicholas Nash, CAP  
Sioux Falls Composite Squadron*

In February, South Dakota Wing held a Cadet Leadership School (CLS) in Pierre. It was an opportunity for cadets, both airmen and noncommissioned officers, to learn the fundamentals of leadership, followership, customs and courtesies, and much more.

In addition to the traditional classroom setting, the cadets participated in activities focusing on teamwork and on aerospace related topics. In addition, the cadets were able to work on their drill maneuvers, as well as attend an Emergency Services winter survival training session taught by Sioux Falls Composite Squadron's Capt. Dan Schneider.

Aside from all the training over the course of the weekend the cadets had sufficient downtime to engage in a game of soccer, basketball, Frisbee, or simply spend time with other cadets from throughout the wing.



*Morning formation.*



*Every day requires preparation.*



*The fine art of leadership being studied.*



*Finally, breakfast is ready.*



*Feeding 12 hungry teenagers requires a well-stocked and staffed kitchen.*



*Not all the kitchen staff were highly proficient.*



# What's an ELT and How Does CAP Track It?

*By Maj. Bruce Kipp, CAP  
Wing PAO*

## **Background**

In 1970, Congress passed a law requiring general aviation aircraft registered in the U.S. to be equipped with an Emergency Locator Transmitter (ELT). The intent of the law was to try to provide for quicker searches for crashed aircraft and to reduce the suffering of survivors of a crash. All private aircraft were to have an ELT installed by mid-1974.

The concept was that in the event of the crash of a general aviation aircraft, other aircraft flying overhead would pick up the ELT signal and notify Air Traffic Control of the signal's general location. This information would be passed to either the U.S. Air Force or the U.S. Coast Guard, the executive agents for search and rescue (SAR) on land and on water respectively. The concept evolved when the United States began launching ELT-detecting satellites in 1982. These two methods provide ELT-detection coverage in the United States.

## **What Is An ELT?**

An ELT is a small emergency radio beacon that when activated sends out a distress signal. The ELT's signal aids in the rapid detection and location of the crash site. There are two primary types

of aircraft ELTs in use today, the older analog model that operates on 121.5 MHz and the newer digital model that operates on 406 MHz.



*Ground search team members train with the older model handheld radio-direction-finding unit.*

## **121.5 MHz Emergency Locator Transmitter**

ELTs operating on 121.5 MHz transmit a low-power analog "siren" tone in the VHF band. There are some limitations to broadcasting on this frequency. Radio waves travel in a straight line-of-sight and can be blocked by terrain or by manmade objects. The signal can also be degraded by poor weather conditions.

Initially, 121.5 ELTs were picked up by satellite but the signal discrimination was not precise and often resulted in a very large search area. In addition coverage was only partial because the satellite had to be in view of both the ELT and its ground station at the same time. Further, the 121.5 MHz frequency was the standard aviation emergency frequency, and there can be interference from other electronic and electrical systems, resulting in false alarms.



*Ground search team member trains with the newer handheld radio-direction-finding unit.*





*Becker DF-517 Antenna-Receiver Unit on a South Dakota Wing aircraft.*

When the ELT-detecting satellite system switched from monitoring 121.5 MHz to monitoring 406 MHz the result is the 121.5 ELT frequency now is only detected by ground-based receivers such as those at local airports and air traffic control facilities. The 121.5 MHz ELT frequency is also monitored by most commercial airliners and some military aircraft while in flight. This method is not very precise and can result in large search areas.

#### **406 MHz Emergency Locator Transmitter**

In February 2009, the satellite network switched from monitoring 121.5 ELTs to monitoring 406 MHz ELTs (hereafter 406 ELT). The 406 ELTs are digital and when activated transmit a digital burst signal every 50 seconds. These ELTs have greater frequency stability and a higher power output than the older 121.5 ELTs.

The burst signal includes an encoded digital serial number unique to that airplane. The signal is received by the satellite system which decodes the information and provides that data to the appropriate search and rescue center. In the U.S., NOAA provides the alert data to the appropriate US Air Force or Coast Guard rescue center. They can then try to contact the owner to verify the status of the aircraft. This feature expedites search and rescue efforts and helps avoid alerting and launching search forces for false alerts.

For some models of 406 ELT the burst signal includes the GPS latitude and longitude of the beacon, which provides instant distress-location information. One of the major benefits of the 406

ELT is that the accuracy of signal location is about 1 to 3.5 miles without GPS, and to less than 100 yards with GPS.

In addition to its high-power digital signal, 406 ELTs transmit a continuous low-power 121.5 MHz signal for close-in homing. The low-power 121.5 MHz “homing” transmitter aids near-by searchers in finding the aircraft.

Current FAA policy does not require already installed 121.5 ELTs be replaced with a 406 ELT. Due to the relatively high cost of a digital 406 ELT many general aviation pilots continue to use their analog 121.5 MHz ELT. They do not need to upgrade until their 121.5 ELT fails to operate correctly.

#### **What Causes An ELT To Activate?**

ELTs are designed with a gravity switch that automatically activates the beacon when a specific amount of gravity (impact) forces the switch closed. The primary reason for activation of an ELT is a crash. There are, however, other reasons why an ELT might activate: if the aircraft experiences an unusually hard landing; if the ELT’s battery begins to fail; or, if there is a malfunction in the aircraft’s electrical circuits. ELTs can also activate due to improper maintenance procedures, or by inadvertent activation from the cockpit. Generally, when activated a 121.5 MHz ELT transmits until the battery is depleted. A 406 ELT is designed to transmit for 24 hours on high power after which its low-power 121.5 MHz signal transmits for about 48 hours, until the battery is drained.



*Cockpit Control-Display Unit of the Becker DF-517 radio-direction-finding unit.*

### **How Does The Civil Air Patrol Become Involved?**

Rescue Coordination Centers (RCCs) in the U.S. are operated by the Coast Guard for maritime emergencies and the Air Force for inland emergencies. The RCCs receive distress alerts and coordinate SAR responses to the distress.

The Air Force Rescue Coordination Center (AFRCC) at Tyndall AFB, Florida is the executive agent for conducting inland SAR missions for ELT signal activations. The AFRCC coordinates SAR activities, but does not directly conduct the missions. In most situations, the actual search and rescue is carried out by the Civil Air Patrol, state police or local rescue services.

When AFRCC is notified of ELT activation it also receives preliminary locational data. This data is used to determine the initial location for a SAR mission. If it is determined that the Civil Air Patrol is best positioned to conduct the SAR the AFRCC notifies the appropriate CAP Wing (each state is a Wing). Each year around 95% of all inland SAR missions are carried out by the volunteer personnel, aircraft and vehicles of CAP.

### **How the South Dakota Wing Tracks An ELT**

The South Dakota Wing currently has six CAP aircraft; three Cessna-172s and three Cessna-182s. Five of the six aircraft are equipped with a high tech radio-direction-finding device, a “Becker

SAR-DF-517”, which can track the 121.5 MHz ELT signal. In addition, the Wing has several hand-held radio-direction-finding (RDF) devices for use by ground search teams.

When South Dakota Wing is placed on alert for an ELT search the Wing will activate one or more of the air and ground assets nearest to the initial locational data provided by the AFRCC. Aircrews and ground search team members assemble and are briefed on the mission.

Initially one or more aircraft take off and fly to the general location provided by the AFRCC and conduct a search pattern using the Becker to try to pick up the ELT signal. This can be a lengthy, tedious process as the aircraft hunts for the signal.

Each time the Becker picks up the ELT’s signal the cockpit control display shows a line-of-bearing and whether the signal is coming from the left or right side of the aircraft. In addition, the Becker registers signal strength; if the signal grows weaker the aircraft is flying away from the ELT, an increasingly strong signal indicates the aircraft is flying towards the ELT. The aircrew further analyzes the location of the ELT by including data from the aircraft’s GPS, by reading old-fashioned paper maps and, during daylight, by using their eyes.

Around the same time one or more Ground Search Teams (GST) are formed, briefed and dispatched towards the initial locational data provided by the AFRCC. As a GST moves along its designated route it uses its hand-held radio-finding-equipment to also search for the ELT’s signal. The search aircraft can communicate directly with the GST and provide it with updated, Becker-derived locational information.

Once the search aircraft has determined the optimal location of the ELT’s signal it orbits the area and directs the GST to that spot. The GST then dismounts and using its hand-held RDF gear pinpoints the ELT’s location and moves in to provide assistance or to secure the area and await the arrival of law enforcement and first responders.

As South Dakota shares a border with five other states there are times when an ELT search may involve CAP Wings of other states in a cooperative search and rescue effort or, in some cases South Dakota Wing may resolve an ELT search by entering an adjacent state.


An example of a multi-Wing search mission

## What's an ELT

*Continued . . .*

came in late November 2014. A pilot, a resident of Lead, SD was reported missing and his aircraft was not at the Spearfish airport. On the presumption that he was out flying, the South Dakota Wing was alerted by the AFRCC and, as Spearfish is close to the Wyoming state line Wyoming Wing was also put on alert. Each Wing launched aircraft to search for the missing aircraft's ELT. In addition, the CAP squadron in Spearfish formed a Ground Search Team which was sent into Wyoming based on initial locational data. The Wyoming Wing and South Dakota Wing aircraft were able to narrow the search area and, with CAP cell phone forensic support, ultimately spotted the aircraft crash site in south-eastern Montana near the Wyoming border. The South Dakota Wing GST travelled from Spearfish into Wyoming and ultimately into Montana where they were first on the scene and worked with the local sheriff to secure the accident site.

An out-of-state search mission came more recently. On 6 April 2015, the AFRCC put South Dakota Wing on alert as aircraft coming into Sioux Falls reported hearing the signal from a 121.5 MHz ELT. Initial locational data was vague citing southeast South Dakota, southwest Minnesota and northwest Iowa. South Dakota Wing launched an aircraft which almost immediately picked up the ELT's signal. Two Ground Search Teams, one from the squadron in Brookings and one from the squadron in Sioux Falls were formed and dispatched to travel search routes in the area also hunting for the signal. The CAP aircraft used its Becker to quickly ascertain that the ELT's signal was coming from the area of Larchwood, IA. Further aerial search work pinpointed the ELT as coming from an airstrip near Larchwood. The airstrip manager was contacted and it was discovered that the ELT signal was coming from an aircraft there that had experienced a hard landing. The manager then went out and silenced the ELT. With the mission successfully accomplished the CAP aircraft and the two Ground Search Teams returned to their bases and stood down.

The Civil Air Patrol's South Dakota Wing stands ready to carry out its emergency services missions by day or by night to help safeguard the lives, health and welfare of the citizens of this great state. 

## Wing Conference & Banquet

*Continued from page 19 . . .*

C/SMSgt Ryan Harris, Lookout Mountain Composite Squadron (Spearfish)

C/CMSgt Justin Harris, Lookout Mountain Composite Squadron (Spearfish)

C/MSgt Austin Rauscher, Lookout Mountain Composite Squadron (Spearfish)

C/MSgt Keyvin Rauscher, Lookout Mountain Composite Squadron (Spearfish)

### ***Achievement Awards***

Capt. James Dillon, Crazy Horse Composite Squadron (Custer)

Lt. Col. Gregory Lair, Sioux Falls Composite Squadron (Sioux Falls)

### ***Commander's Commendation***

2<sup>nd</sup> Lt. Manford Steele, Sioux Falls Composite Squadron (Sioux Falls)

Maj. David Small Jr., South Dakota Wing Staff

Capt. Jerome Foy, Sioux Falls Composite Squadron (Sioux Falls)

Maj. Elliot Filler, Big Sioux Composite Squadron (Brookings)

Capt. Karen Espeland, Sioux Falls Composite Squadron (Sioux Falls)

Capt. Sylvia Small, South Dakota Wing Staff

Maj. Sharon Moad, Crazy Horse Composite Squadron (Custer)


C/Capt Nicole Schneider, Sioux Falls Composite Squadron (Sioux Falls)

C/Capt Samuel Huntington, Sioux Falls Composite Squadron (Sioux Falls)

C/2<sup>nd</sup> Lt Bradley Blansett, Lookout Mountain Composite Squadron (Spearfish)

C/CMSgt Justin Harris, Lookout Mountain Composite Squadron (Spearfish)

C/2<sup>nd</sup> Lt Devon Brown, Sioux Falls Composite Squadron (Sioux Falls)

C/Col William Small, Lookout Mountain Composite Squadron (Spearfish) 



# Wings of Our Founders – 1942 CAP Piper J-3 Cub

*Lt. Col. Gary W. Rae, CAP  
Wing Chaplain*

My love of aviation is part of the Rae family's DNA. Both Mom and Dad were in B-24 bombers in World War II. Mom was a mechanic on the Norden and Sperry bombsights and Dad was a tail gunner. I grew up on New York's Long Island where Dad would preserve the last grass airstrip on the island from commercial growth. I had a chance to fly in a 1929 Fleet, Navy SNJ, Stearman, and more. Dad loved to build balsa wood model airplanes. Perhaps it was a prelude to his building a full scale replica of a 1929 Petenpol Sport Aircraft in his garage.

A few years back as we were going through Dad's things in preparation for moving him to an assisted living facility when we found a CAP shoulder patch. We learned he had been in CAP in 1942, prior to his entering the U.S. Army Air Forces (forerunner of the USAF) in August of 1943. His shoulder patch will soon be on my recreation of a 1942-style CAP officer's uniform that I will wear to promote CAP's 75th Anniversary in 2016. Although I had been a model airplane builder in my youth, 40 years of ministry kept me from pursuing it again until I retired. Dad's CAP patch inspired me to make my first serious model, a 1942 Piper J-3 Cub; one of the planes the German's cursed whenever they were on submarine patrol along the U.S. coast.

Building a 6-foot wingspan (1/6 scale) begins with studying the plans for days. Next I created a



*Action figure of baseball great Ted Williams sits in the cockpit. Williams joined the Navy Reserve in May 1942, went on active duty in 1943, and in May 1944 was a lieutenant in the Marine Corps as a naval aviator.*

workspace large enough to accommodate the large wing and fuselage. Foam board on a table works great because it is flat and I can stick T-Pins into it. Wax paper is essential on top of the plans to protect them when I glue the spars and ribs together. Other essential tools include good lighting, a supply of Xacto knives, mini-saws, carpenter's glue, paint brushes, paints, thinners, sandpaper and a good straight edge ruler. I covered my wooden frames with monocoat, a heat shrink cover not all that different than the Ceconite used on modern day rag aircraft. A special iron attaches and shrinks the fabric like skin. But the greatest tools are patience in the process and willingness to get lost in the details. Creativity helps; the plans don't always



tell you how to make a cockpit or doors that open. Mistakes happen so you learn how to camouflage them, though I always see them.

The birth of my J-3 began with the end goal in mind. A picture is in front of me. It will be yellow with doors that open, a 1/6 scale pilot (Ted Williams), and 1942 CAP markings made for the wings. I study the National CAP History site to learn exactly where those markings are to be placed. Not everything comes in the kit. The web helps me search for scaled cylinders to put on the cowling, find a wood propeller I can attach, get real air filled tires and more. NC50720 took six months in 2014 to build. The rest is patience, persistence and practice. I began with the wings, the elevators and rudder sections before moving on to the fuselage. There I modified the plans to include a cockpit. Many a day I would cough on the balsa dust. The wing's leading edge and rounded surfaces all required careful shaping. The spars in the wings and the landing gear were reinforced with bass wood or plywood and then epoxied for strength. Over the months the pieces slowly came together. The birth of my J-3 began with the goal in mind. I substituted aluminum struts found at a hobby store for the bass wood struts. I learned how to spray and paint. The most difficult part was learning how to get wrinkles out of the monocoque covering on curved surfaces. The model, which is for display only and not intended to fly, cost about \$300 to make by the time you buy the kit, paint, tools, covering and special markings.

Today many people like to buy "Ready to Fly" (RTF) models. Not me! I wanted my 1942 Piper J-3 Cub to be a faithfully scaled model, a work of art and to tell the history of CAP in the early days. My model connects me to CAP history.

In my mind's eye I see myself sitting in the



drafty cockpit of a Piper J-3. My aircraft weighs a mere 765 lbs. empty. Its top speed was 80 MPH. It held two persons in tandem. Early models boasted a 40HP engine that was increased to 65HP during the war. I try to imagine what it must have been like to leave the airfield in Atlantic City, New Jersey or Mitchell Field on Long Island and to fly out over the Atlantic Ocean. As my Continental engine throttles up, the plane bumps, zigs and zags as it taxis along the grass strip. I turn it into the wind, give it full power and hold the stick in my gut for the first few seconds until I can gently ease it forward to bring the tail up. She gathers speed. I hold it to the runway until it's ready to leap into the air. With a slight pull back on the stick, the engine chews into the sea coast air, the wings waver as I get the feel of flight. I bank left towards the sea and search the ocean with expectation, looking for the silhouette of a German Unterseeboot (submarine). U-Boats filled our eastern coastal waters in search of merchant supply ships travelling up and down the coast and those bound for Europe. With limited communications, in vulnerable little aircraft, CAP's men and women gave our nation time to build up its air forces, chased the U-boats from our shores, and protected vital supply lines.

With so many Piper J-3 Cubs being produced and owned by civilians it had become the primary trainer for the Civilian Pilot Training Program by the time World War II broke out. During the war it was one of the most common aircraft used by the newly formed Civil Air Patrol. Like so many in those days, from Rosie the Riveter to the CAP men and women who towed targets for antiaircraft gunners, couriered parts and personnel for the war industry, flew border patrol, acted as skywatch for forest fires, or those who stood on rooftops as air raid wardens, all did their part. 🇺🇸



## Team Big Sioux Wins Second Place in National CyberPatriot-VII

*By Maj. Bruce Kipp, CAP  
Wing PAO*

The cadet cyber-security team of the Big Sioux Composite Squadron won second place in the national finals of the Air Force Association's seventh annual CyberPatriot Competition held in Washington, D.C. from 11-15 March. In addition, they were the top Civil Air Patrol team in the competition.

The team from Brookings competed in the "All Service Division" national finals for the fourth year in a row against teams from the Army, Air Force, Navy and Marine Junior ROTC programs, the Naval Sea Cadet Corps and the Civil Air Patrol. In CyberPatriot-VII 1,007 teams competed in the All Services Division, 400 teams from CAP units. Only the top two teams from each organization in the All Services Division got to go to the national finals. "We are extremely proud of the accomplishments of the Big Sioux squadron in their pursuit of being the top team in the competition. A lot of hard work and dedication goes into preparation for this competition and to be the top Civil Air Patrol team in the nation is no easy feat." Said Colonel John Seten, the Wing Commander of the South Dakota Civil Air Patrol.

In the national finals 28 teams, 13 from the All Service Division, competed to defend virtual networks and mobile devices from a professional aggressor team. The national finalists also faced off in




*Team Big Sioux at CyberPatriot-VII Competition Awards Ceremony (L-R) NHQ Chief of Staff Col. Larry Ragland, Cadet Maj. Joshua Klosterman, Cadet Chief Master Sgt. Jaden Petersen, Cadet Lt. Laura Rudnik, Cadet Lt. Chris Dinnel, Cadet Tech. Sgt. Nathaniel Fleet.*

four additional competition components: the Digital Cyber Crime Scene Challenge from the Digital Forensic Consortium, the Cisco Networking Challenge, the Leidos Digital Forensics Challenge and a Mobile Application Challenge hosted by AT&T. The teams were scored on how quickly and effectively they established and maintained secure networks.

Team Big Sioux consists of Team Captain Cadet Maj. Joshua Klosterman of Brandon, Cadet 2nd Lt. Chris Dinnel, Cadet Chief Master Sgt. Jaden Petersen and Cadet Tech. Sgt. Nathaniel Fleet, all from Lake Benton, MN, and Cadet 2nd Lt. Laura Rudnik of Brookings. The team is coached by Capt. Shannon Hofer of Hendricks, MN, who is the commander of the Big Sioux Composite Squadron

and Wing Director of Information Technology and Web Security Administrator. The team was mentored by Cadet Capt. Tyler Gross of Volga.

CyberPatriot VII began last October with more than 2,100 teams from all 50 states, Canada and Department of Defense dependent schools in Europe and the Pacific. After two months of rigorous online challenges, the Open Division and All Service Division teams were divided into three tiers: Platinum, Gold and Silver. Team Big Sioux was placed in the Platinum Tier. The teams continued to compete within their tiers for state awards and advancement to the regional/category round. Only teams in the top Platinum tier were eligible to advance to national finals competition. 



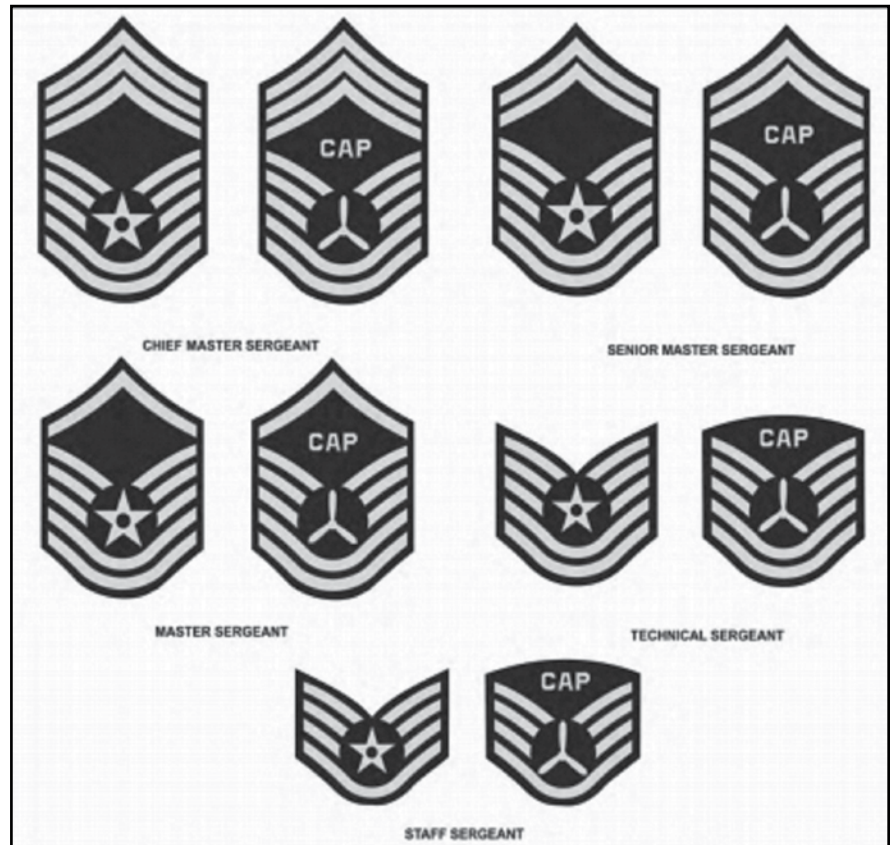
# South Dakota Wing's First Senior Member NCO

*By Maj. Bruce Kipp, CAP, Wing PAO and  
Lt. Lori Seten, CAP, Wing Personnel Officer*

David Stockinger is South Dakota Wing's first and so far only senior member to hold CAP noncommissioned officer (NCO) rank. When David joined the Sioux Falls Composite Squadron in April 2012 he entered into the rank system for CAP senior members. After a probationary period he was promoted to the rank of Second Lieutenant in October 2012.

At the time David joined CAP he was on active duty with the South Dakota Air National Guard and was advancing through their rank structure as an enlisted man. In 2015, David had eight years of service with the SDANG and had reached the rank of Staff Sergeant (SSgt).

In August 2014, with the approval of its executive agency, the U.S. Air Force, CAP modified its NCO rank system for senior members with the publication of a revised version of CAP Regulation 35-5, CAP Officer and Noncommissioned Officer Appointments and Promotions. Under the old system CAP had NCO ranks for senior members. However, the old system did not allow for promotion within the NCO ranks. If you entered CAP and opted for NCO rank then that was the rank you held throughout your CAP service. The revised system contains the criteria for promotion within the NCO ranks. Now one can advance from the entry grade of Staff Sergeant to the top NCO grade of Chief Master Sergeant.



*Chart showing the US Air Force NCO rank insignia and the corresponding CAP NCO rank insignia*

When David became aware of this change he submitted paperwork to be reduced in grade from Lieutenant to Staff Sergeant to match his SDANG rank. On his paperwork he indicated that he would like to continue his CAP service as an NCO. As David looks forward to promotion through the SDANG NCO ranks he can now look forward to advancing to the equivalent grade in the CAP NCO rank system as he gains experience, training and longevity in CAP. 🇺🇸

# Wing Legislative Day at the State Capitol

*By Maj. Bruce Kipp, CAP  
Wing PAO*

11 February was South Dakota Wing's "Legislative Day" at the State Capitol. Some 50 officers and cadets representing five squadrons converged on the state capitol. There they met with Governor Dugaard and posed with him on the Grand Staircase of the Capitol Rotunda. Afterwards the SDWG members attended the legislative sessions of the House and Senate where they received special recognition when legislators of both houses gave the SDWG members a standing ovation.

During the afternoon break in the legislative sessions SDWG hosted a snack for the legislators. 1st Lt. Rachel Kuecker arranged for cupcakes decorated with CAP insignia. While mingling with the legislators the officers and cadets handed out informational materials about SDWG and CAP and spoke with them about the Civil Air Patrol and what South Dakota Wing does for our communi-

ties, our counties and the state.

Wing Commander, Col. John Seten commented, "The Legislative Day for Civil Air Patrol is a great way for us to tell our story to the legislators. We are able to brief them on what we've done for the past year and answer any questions that they may have about our organization. We also managed to recruit many new members into our legislative squadron. We always look forward to our trip to Pierre."

Several SDWG officers were key to the success of this event. Kudos go to former state representative 2nd Lt. Manny Steele who met with his former colleagues and invited them to join CAP's State Legislative Squadron. Kudos also go to Maj. David Small Jr. for arranging transportation, event scheduling and photography, and to Maj. Todd Epp for arranging the event itself. 🇺🇸



*Officers and cadets of the South Dakota Wing of the Civil Air Patrol pose with Gov. Dugaard on the Grand Staircase of the Capitol Rotunda.*





*Overview of survival gear and its uses.*



*How fire can help keep you alive.*

# Winter Survival Training

*Cadet Capt. Nicole Schneider, CAP, Sioux Falls Composite Squadron*

*Maj. Sharon Moad, CAP, Crazy Horse Composite Squadron*

*and Maj. David Small, CAP, Wing Chief of Staff*

The winter of 2014/2015 was not a typical South Dakota winter. Yes, it was cold, and yes it was windy but what was lacking in many places was snow. Having completed a successful Cadet Leadership School the previous day approximately 20 cadets from all squadrons save one trained in the basic skills of winter survival in an emergency situation.

First and foremost, 1st Lt. Dan Schneider of the Sioux Falls Composite Squadron, a professional firefighter, explained that maintaining a positive attitude greatly improves a person's chance of sur-



*Home Sweet Home.*



*2015 SDWG winter survival training participants.*



vival. Our brain is our best survival resource.

Sunday, 15 February, was cold and blustery. Lt. Dan illustrated how one can keep warm in adverse weather with minimal equipment from a 24-hour pack. Organized into small groups

the cadets demonstrated their recent learning by safely starting small fires using natural materials they scavenged and items from their 24-hour packs. Under his watchful eye each group started a fire and built it into about a 24" sustaining blaze that could be fed indefinitely to keep everyone warm. Afterwards, each fire was carefully extinguished and then double checked to ensure there was no danger of an uncontrolled event later.

Schneider then demonstrated how to build a shelter from wind and weather using only sticks, bushes and items from a 24-hour pack, and by taking advantage of natural wind breaks. He demonstrated that making



*Building a functional emergency shelter.*



*Ahhhh, warmth!*



*Success on a small scale.*

a shelter behind a natural wind break allows it to be much warmer and more durable than one built out in the open. The cadets then scavenged for shelter building materials and built a functional emergency shelter.

By noon everyone was colder but wiser and ready to head home in the warm, toasty CAP vans.

**OBSERVE---THINK---**

**REACT** 



*Building a fire isn't as easy as it looks.*


## CGM Update

*Continued from page 7 . . .*

Washington, D.C. for the ceremony last December and was presented her husband's CGM by Gen. Vazquez.

South Dakota Congresswoman Kristi Noem presented the CGM to the family of Earl Wilkinson at a ceremony on 8 April at the South Dakota School of Mines and Technology in Rapid City. It was received on behalf of the family by his grandson Tom Senesac.

South Dakota Congresswoman Noem presented the CGM to the family of John G. "Jack" Rae Jr. at a ceremony on 18 April during the South Dakota Wing Conference in Pierre. It was received on behalf of the family by his son Gary W. Rae who is a CAP Lieutenant Colonel and the South Dakota Wing Chaplain.

Henkin, Brehe and the Jeffries family will be presented with the CGM at ceremonies to be held in South Dakota at a later date. 



*A CAP aircraft closes in on a German submarine off the U.S. coast during World War II.*